



**US Army Corps
of Engineers.**

USACE Approach to Information Technology

18 September 2007

Jim Walker, HQUSACE



**US Army Corps
of Engineers.**

Inland Navigation Applied Technology

- Coastal River and Inland Services
- Maintenance Management
- Inland Navigation Safety Initiatives
- Inland Navigation Performance Measures



US Army Corps
of Engineers.

CRIS

- Collaborative effort of multiple Federal agencies
 - Corps, Coast Guard, NOAA
- Inland Electronic Navigation Charts (IENC's)
- Automatic Identification System (AIS)
 - 2 way communication
 - Data standardization (commodity, vessel and location)



US Army Corps
of Engineers.

AIS and the Corps

- Real Time Operational data – to the vessel
 - Electronic Navigation Charts Updates
 - Lock condition (available, queue)
 - Real time current and wind velocities
 - River stage, water releases
 - Navigation safety information (hazards, Aids to Navigation status, etc.)



US Army Corps
of Engineers.

Maintenance Management

- Major component of Asset Management
- Facilities and Equipment Maintenance (FEM)
- Maximo (IBM) DoD standard
- eFEM deploys Oct 2007
- Deployment complete in Corps Districts by Sep 2009, Labs in FY 2010



US Army Corps
of Engineers.

Navigation Safety Initiatives

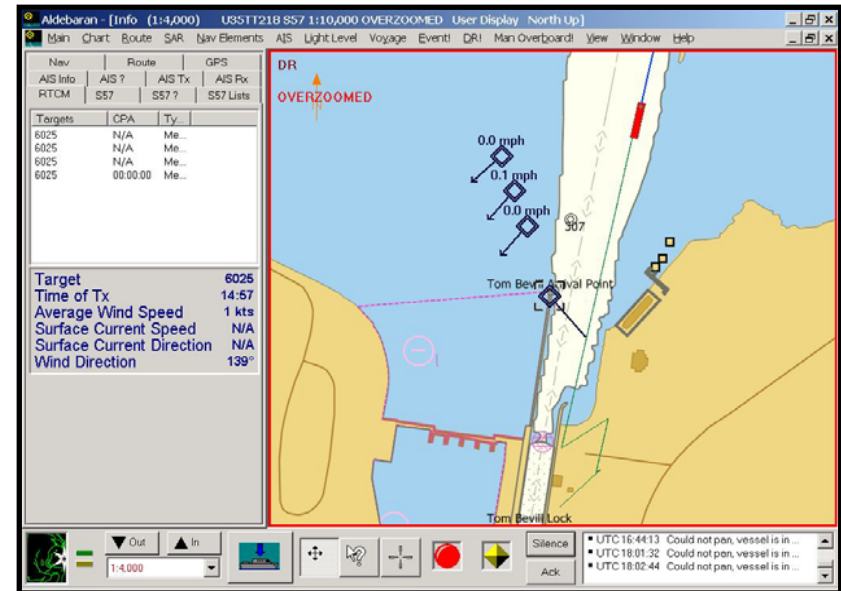
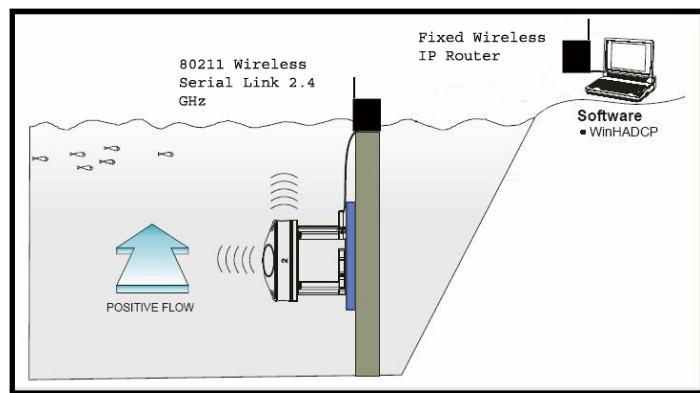
- GOAL: Reduce the frequency of allisions
- GOAL: Reduce the damages to lock/dam and vessel
- Review allisions from 2002-2007
- Joint effort with Coast Guard and Towing Industry



**US Army Corps
of Engineers.**

Real Time Current Velocity System

- **Capability Being Developed**
 - Real Time Outdrift Measurement that is Transmitted to Tows Approaching a Corps Lock and Dam
- **Final Products**
 - RTCV Systems Installed on Corps Structures with known Outdrift Problems



- **Benefits: Improved Safety on Inland Waterways**
 - Real Time Data provided for the Mariner to make better decisions
 - Utilizes AIS Network



US Army Corps
of Engineers.

Lock Distance Measurement System

- **Capability Being Developed**
 - Every Vessel Receives Real Time Distance
 - Distance Can be Transmitted by AIS
 - Displayed on IENC's Providing $\pm 3\text{ft}$ Accuracy





US Army Corps
of Engineers.

Navigation Lock Approach

- Energy absorbing systems at navigation lock approach
- Research, then implement demonstration projects



US Army Corps
of Engineers.

Navigation Safety Initiatives

- AIS demonstration projects:
 - Louisville, KY – McAlpine Lock – USCG/Corps
 - Galveston, TX – Galveston Causeway Bridge – USCG/NOAA/Corps - nav industry purchasing and maintaining the equipment



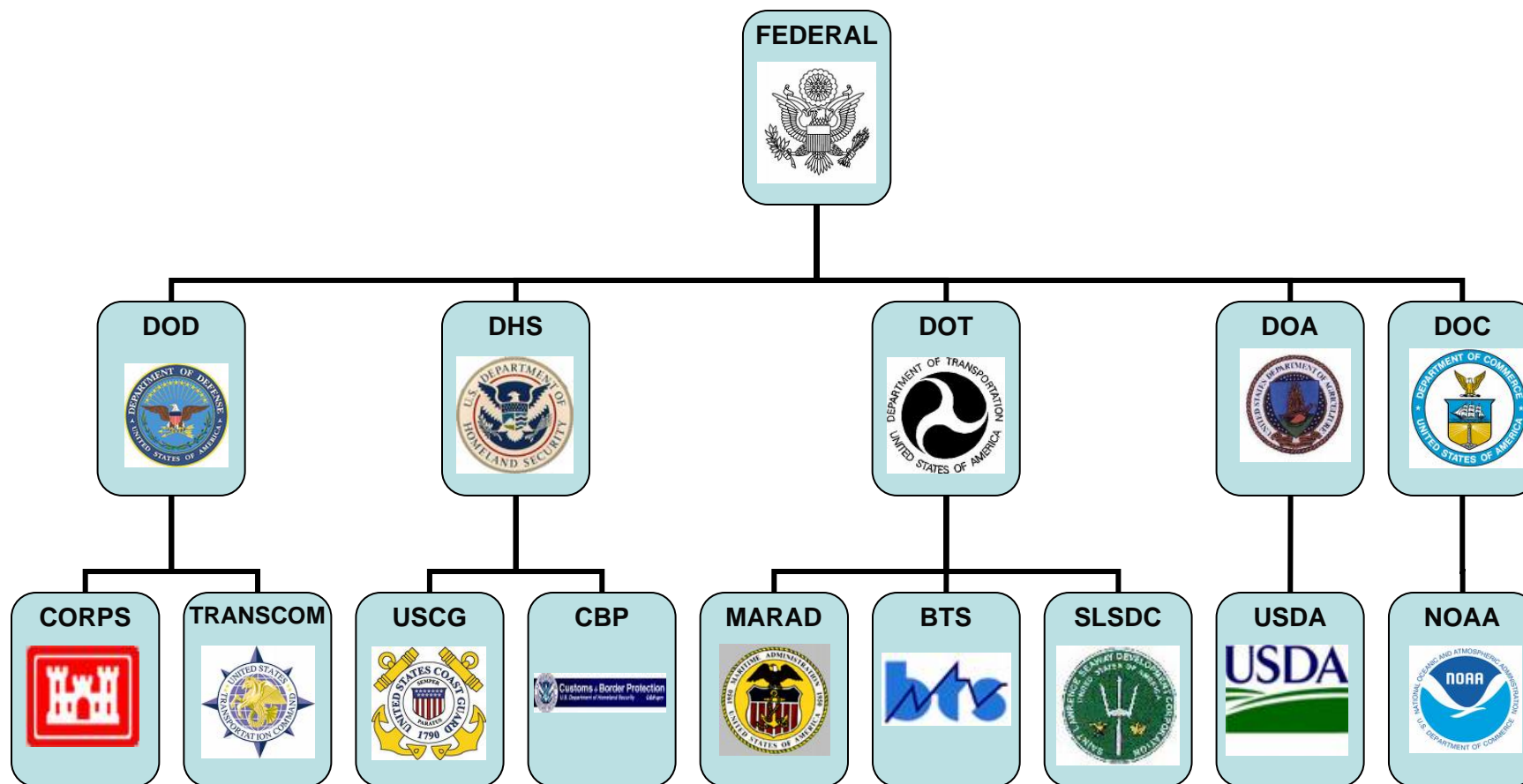
US Army Corps
of Engineers.

OMB Performance Measures

- Inland Navigation rated as 'Results Not Demonstrated'
- Reliability - lock and channel availability
- Lock availability – scheduled and unscheduled closures
- Focus on mechanical breakdowns, which are affected by funding.
- Not just risk, but consequences



Committee on the Marine Transportation System



Domestic Federal Navigation Data Requirements



US Army Corps
of Engineers.

HOW CAN I HELP?

- **CRIS/AIS**
 - Doug McDonald, Dave Lichy, Michael Winkler and Rich Lockwood, Corps
 - Brian Tetrault, Coast Guard
- **FEM:** Bob Leitch, Corps
- **Inland Navigation Safety Initiative**
 - Michael Winkler, Corps
- **Navigation Performance Measures:** Jim Walker, Corps
- **CMTS:** Helen Brohl